

EDES 408 Winter 2003 – Water and the Human Environment

Term Project

Introduction

In the relatively dry Mediterranean climate of the central coast, water is a significant limiting factor on the carrying capacity of this landscape. Despite only twenty annual inches of rainfall, this landscape supports a rich ecology, which for thousands of years has included humans. As the human population continues to grow, it will reach levels that are historically unprecedented. The impact on the ecology of our watershed, and the availability of clean water will become an increasing concern.

This term we will explore answers to the following questions:

What are the impacts of our current water usage patterns in this watershed ?

How can we apply sustainable principles to protect the ecological health of the San Luis Creek watershed while accommodating projected human population?

Description of assignment

Your assignment for this term will be to study human impacts on the landscape of the San Luis Creek watershed. Working in teams, you will select a land use type, and then find a specific example of this land use (located within the watershed boundaries) which you will study in-depth.

For example, if your team is interested in studying housing, you will identify an existing piece of land within the watershed either currently functioning as housing or slated to be developed as such, which will be your “case study” site for the term. The boundary of the selected site is to be determined by your team, but must be relevant to gain in-depth understanding at a variety of scales. The team might choose anything from a suburban neighborhood, an apartment building within the city of San Luis Obispo, a temporary encampment under a bridge, or a 5-acre retirement homestead out beyond the city limits.

Land use types

- **R**esidential- Low, medium or high density housing
- **I**ndustrial/Commercial- Heavy or light manufacturing, offices, retail stores, wholesale warehouse, etc.
- **A**gricultural- (Large or small scale) Ranching, farming, viticulture, greenhouses, etc.
- **I**nstitutional- Hospital, campus, prison, etc.
- **A**ctive/developed recreational- Golf course, sports fields, boy scout camp, etc.
- **P**assive recreational/open space habitat- hiking trails, wildlife preserve, etc.

Whatever land use type and case study site your team identifies, you will be expected to research and model the following factors:

The water cycle

1. Source – Where does the water used on this site originate? Are there other viable untapped sources?
2. Consumption or use- How is water used, and how much is used (per day? Per year?)
What is the capacity for increased use?
3. Re-use- Is water re-used on site? By what means and to what purpose?

4. Treatment- What happens to polluted or “used” water? Is it treated on or off site? What methods are used?
5. Conservation- What methods of water conservation are being employed on site or might be implemented?

Product

Your team will be working to produce:

- A 24” x 36” poster summarizing your findings- Must include enough explanatory text, diagrams and illustrations/photos to “stand alone” without further explanation.
- A digital version of this information. This shall be used for (Powerpoint or other) presentation.

Team organization:

Within your team, form three subgroups to address the following specific aspects of your case study: (Please no fewer than two members per subgroup, and no more than four)

- Political/social
- Environmental
- Economic